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Antibiotic consumption of hospitalization in China (2011-2014): An analysis of CAS data

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Introduction: Antibiotic drug consumption is a major driver of antibiotic resistance. China has built Center for Antibacterial Surveillance (CAS) to monitor antibiotic use of hospitals in 2005. CAS currently has 192 core member institutions; all of them are tertiary hospitals.

Methods: Valid data of inpatient antibiotic consumption of 183 tertiary hospitals during the period 2011-2014 have been collected using ATC/DDD and expressed in Defined Daily Dose (DDDs). We used compound annual growth rates (CAGR) to analyze the consumption sum and DDDs.

Results: The CAGR of DDDs and costs of antibiotic use in 183 tertiary hospitals is -6.02% and -5.58%. The most consumed drugs were cephalosporins (an average DDDs of 46.35% a year), which also costs accounted for the most (an average of 48.38% a year). The proportion of DDDs of carbapenems has been growing from 2011 (6.99%) to 2014 (6.92%), CAGR was 4.81%, which the most used drugs were meropenem and with the DDDs growing, the proportion of costs of carbapenems increased rapidly, CAGR was 9.67%. In method of antibiotic administrator, the injection method was the most used, which average proportion of DDDs for four years was 84.55%, and the average proportion of consumption amount was 94.95%.

Conclusion: Implementing of a series of antibacterial stewardship policies, had an effect to control DDDs of antibiotic consumption, but costs control was weak. Increasing use of carbapenems shows that there is a risk of bacteria resistance in tertiary hospitals in China.

Biography

Xiaoyuan Qu is a PhD candidate of Social Medicine and Health Management at Shandong University. His research field is Antibiotic Use and Management.

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